

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

_____)	
SKYLINE SOFTWARE SYSTEMS, INC.,)	
Plaintiff,)	
)	
v.)	CIVIL ACTION NO. 04-11129-DPW
)	
KEYHOLE, INC. and)	
GOOGLE, INC.,)	
Defendants.)	
_____)	

**PLAINTIFF SKYLINE SOFTWARE SYSTEMS, INC.'S REPLY
MEMORANDUM ON ITS PROPOSED CLAIM CONSTRUCTION**

I. INTRODUCTION¹

Characteristic of one who has been accused of patent infringement, Defendants attempt to overly complicate what is, in reality, a straight-forward infringement case by: (1) identifying 56 claim terms, phrases and sentences that allegedly require construction;² (2) proposing convoluted and overly-restrictive definitions for the sole purpose of avoiding infringement; (3) asking the Court to construe the same terms over and over again, each time the term forms a part of an additional claim phrase or sentence; and (4) introducing extrinsic evidence for the sole purpose of contradicting the otherwise unambiguous intrinsic record. The Court should flatly reject Defendants' thinly-veiled non-infringement arguments and adopt Skyline's proposed claim constructions.

¹ Skyline submits this Reply Memorandum in accordance with the Court's Scheduling Order dated December 28, 2004.

² Defendants have apparently reduced the number of identified claim terms that allegedly require construction from 61 (as set forth in its supplemented answers to interrogatories (*see* Exhibit D to Skyline Opening Brief)) to 56 (as reflected in Exhibit A to the Feiner Declaration).

Contrary to Defendants' repeated but unsupported assertions, Skyline has provided ample evidence to support its proposed claim constructions. As there is no ambiguity in the intrinsic record, Skyline has properly relied upon the descriptions and disclosures contained in the '189 Patent itself. Where appropriate, Skyline has relied upon dictionaries from the time of the invention to confirm the meaning of certain claim terms to one of ordinary skill in the art.³ Seeking to evade the otherwise clear patent language and intrinsic record, Defendants rely upon the extrinsic testimony of their expert witness as to what one of ordinary skill in the art would understand the terms at issue to mean. Defendants' expert does not provide scientific context; rather, through his declaration, Defendants seek to replace the role of the Court in construing the disputed claim terms. Notably, Defendants' expert relies only on *the Patent itself* to form his opinion. Thus, Defendants (and their expert) confirm that the Court need look no further than the Patent when construing the disputed claim terms.

II. LEGAL ARGUMENT

A. Dr. Feiner's Litigation-Driven Declaration Cannot Be Used To Contradict The Intrinsic Evidence.

Defendants' arguments hinge on the Court's acceptance of their proffered extrinsic evidence: the Declaration of Steven K. Feiner, Ph.D. In his Declaration, Dr. Feiner relies -- with a single exception -- on the language of the Patent itself.⁴ The Federal Circuit has made abundantly clear that trial courts may rely on extrinsic expert testimony only "if the patent documents, taken as a whole, are *insufficient* to enable the court to construe disputed claim terms." *Vitronics*, 90 F.3d at 1584 (emphasis added). Extrinsic evidence, such as expert

³ The Federal Circuit is currently considering, *en banc*, whether dictionaries should formally be considered "intrinsic" evidence, given the unbiased assistance that such evidence provides trial courts in the claim construction process. See *Phillips v. AWH Corp.*, 363 F.3d 1207 (Fed. Cir. 2004), *vacated, reh'g en banc granted*, 376 F.3d 1382 (Fed. Cir. Jul. 21, 2004). The *en banc* hearing was held on Feb. 7, 2005.

⁴ The sole exception to this assertion is Dr. Feiner's reliance on a definition of "terrain" from a 1997 edition of the *American Heritage College Dictionary*. See Feiner Decl., ¶ 19. Dr. Feiner's reliance on this general dictionary is erroneous, as discussed in Section II(B)(2).

testimony, that “var[ies] or contradict[s] the manifest meaning of the claims” must be rejected. *Vitronics Corp. v. Conceptronics, Inc.*, 90 F.3d 1576, 1585 (Fed. Cir. 1996) (reversing non-infringement ruling because district court relied on expert testimony and other extrinsic evidence rather than on the patent claims, specification and file history). By relying entirely on the text of the Patent itself, Dr. Feiner confirms that the ‘189 Patent and the intrinsic evidence leave no ambiguity as to the meaning of the disputed claim terms. As such, there is no need for the Court to rely upon extrinsic, after-the-fact evidence of a paid expert. *See, e.g., Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1332 (Fed. Cir. 2003) (stating that “expert testimony and declarations ... cannot be used to vary the plain language of the patent document.”); *Dow Chem. Co. v. United States*, 226 F.3d 1334, 1342 (Fed. Cir. 2000) (holding that trial court’s “reliance on expert and other testimony to alter the meaning of [a patent’s] claim ... is reversible error.”); *Trilogy Communications, Inc. v. Times Fiber Communications, Inc.*, 109 F.3d 739, 744 (Fed. Cir. 1997) (stating that “[w]hen ... the district court has concluded that the patent specification and the prosecution history adequately elucidate the proper meaning of the claims, expert testimony is not necessary and certainly not crucial.”).

Here, Dr. Feiner does not offer a tutorial on the technology at issue. Nor does he provide any context for how one of ordinary skill of the art would have understood the claim terms in dispute *at the time of the invention* in 1998-99. Nor does he review any prior art at the time of the invention to distill the meaning of certain disputed claim terms as understood by one of ordinary skill in the art in 1998-1999. Nor does he rely upon any statements from the prosecution history to support his purported interpretation as one of ordinary skill in the relevant art at the time of the invention. With a single exception, Dr. Feiner relies solely on the text of

the Patent itself to support Defendants' proposed claim construction. Dr. Feiner impermissibly reads the '189 Patent through the lens of hindsight in 2005.

"[O]pinion testimony on claim construction should be treated with the utmost caution, for it is no better than opinion testimony on the meaning of statutory terms." *Vitronics*, 90 F.3d at 1585; *see also Dayco Prods, Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1324 (Fed. Cir. 2001) ("In approaching claim construction, we must always be conscious that our objective is to interpret the claims from the perspective of one of ordinary skill in the art, ... not from the viewpoint of counsel or expert witnesses retained to offer creative arguments in infringement litigation."); *Bell & Howell Document Mgmt. Prods. Co. v. Alltek Sys.*, 132 F.3d 701, 706 (Fed. Cir. 1997) (stating that "[p]atents should be interpreted on the basis of their intrinsic record, not on the testimony of such after-the-fact 'experts' that played no role in the creation and prosecution of the patent."). Dr. Feiner's Declaration offers no more than "conclusory legal opinions ... rather than evidence of how th[e] term[s are] commonly used and understood in the art." *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1578 (Fed. Cir. 1995). Because an examination of the Patent and the intrinsic evidence leave no ambiguity as to the meaning of the claim terms in dispute, as Dr. Feiner confirms, the Court should give no weight to the extrinsic expert opinion offered by Defendants.

B. Skyline's Responses To Defendants' Proposed Definitions

Defendants repeatedly chastise Skyline for allegedly "failing" or "refusing" to address a selected set of 56 claim terms, phrases, and sentences for which they seek construction by the Court, many of which are duplicative or unnecessary. Yet, Defendants do not even address two of the ten core claim terms ("processor" and "communication link") for which Skyline has specifically provided proposed definitions in its Opening Brief. *See Skyline's Opening Br.* at 16-

19. Accordingly, the Court should adopt Skyline's proposed constructions of these terms.

Defendants' arguments with respect to the remaining claim terms in dispute are addressed in turn below.

1. *data block*

Defendants argue that "data block" should be defined as:

an image of a terrain area that is composed of pixels, where each data block optionally also contains data associated with the image of the terrain area, such as data describing other objects that overlay the terrain; each data block has one particular resolution.

Defendants' Br. at 10-12; Feiner Exh. A at 1. Defendants' convoluted construction of "data block" is contrary to the plain and ordinary meaning given to both "data"⁵ and "block"⁶ by those of ordinary skill at the time of the invention. "Data block" is merely the logical combination of these two terms.

Defendants' proposed construction confuses the "data block" used by the processor to render an image with the actual image itself. This misunderstanding is evidenced by Defendants' argument that a "data block" is "an image⁷ of a terrain area that is composed of pixels⁸" A data block may, in some embodiments, be a block of stored data that describes

⁵ "Data" is defined by the *Microsoft Computer Dictionary* as "an item of information." Exh. 1 (*Microsoft Computer Dictionary* at 122 (4th ed. 1999)).

⁶ "Block" is defined by the *Microsoft Computer Dictionary* as "1. Generally, a contiguous collection of similar things that are handled together as a whole." Exh. 1 (*Microsoft Computer Dictionary* at 54 (4th ed. 1999)). *See also id.* at 55 ("Block Size" which is defined as the declared size of a block of data transferred internally within a computer, via FTP, or by modem).

⁷ The *Microsoft Computer Dictionary* defines an "image" as "1. A stored description of a graphic picture, either as a set of brightness and color values of pixels or as a set of instructions for reproducing the picture. ...2. A duplicate, copy, or representation of all or part of a hard drive, a file, a program, or data. For example, a RAM disk can hold an image of all or part of a disk in main memory..." Exh. 1 (*Microsoft Computer Dictionary* at 230 (4th ed. 1999)).

⁸ The *Microsoft Computer Dictionary* defines a "pixel" as "[s]hort for picture (pix) element (el). One spot in a rectilinear grid of thousands of such spots that are individually "painted" to form an image produced on the screen by a computer or on paper by a printer. A pixel is the smallest element that display or print hardware or software can manipulate in creating letters, numbers, or graphics." Exh. 1 (*Microsoft Computer Dictionary* at 345 (4th ed. 1999)).

terrain. Exh. B ('189 Patent, col. 4, ln. 12).⁹ Indeed, Claim 1 of the '189 Patent refers to “data blocks describing three dimensional terrain...” *Id.* The “data block,” however, is not the image, but is rather data used to render the image. *Id.*, col. 8, lns. 15-37.

The Patent teaches that data contained in a “data block” can correspond to an image in some embodiments of the invention, and in such embodiments, can be referred to as an “image block” to clarify a specific type or use of a data block. *See, e.g., id.*, col. 8, lns. 18-20; Figs. 2-3 (identifying exemplary image blocks (42)). The Patent describes other potential uses of the inventions “to convey large databases of data,” which, for example, could be stock values that are to be graphically represented. *Id.*, col. 16, lns. 9-26. Data corresponding to images can be used to form images, or an image may be converted into data that populates data blocks or image blocks. *See, e.g., id.*, Figs. 2-3 and related description. Such image blocks and data blocks still comprise data, usually numbers, and are not themselves images. Equating an image with the data used to store a computer representation of that image is contrary to the usage of those terms in the Patent and the basic meaning of those terms in the context of computer technology.

Defendants also assert that the data blocks are composed of pixels. This is incorrect for the same reasons that a data block is not an image. A “pixel” is a contraction of the term “picture [*pix*] element [*el*].” The *Microsoft Computer Dictionary* defines the term “pixel” as:

n. Short for picture (**pix**) element. One spot in a rectilinear grid of thousands of such spots that are individually "painted" to form an image produced on the screen by a computer or on paper by a printer. A pixel is the smallest element that display or print hardware and software can manipulate in creating letters, numbers, or graphics.

⁹ All exhibits cited herein are attached to the Declarations of H. Joseph Hameline, Esq. dated March 4, 2005 and April 8, 2005.

Exh. 1 (*Microsoft Computer Dictionary* at 345 (4th ed. 1999)). Similarly, “pixel image” is defined as:

n. The representation of a color graphic in a computer's memory. A pixel image is similar to a bit image, which also describes a screen graphic, but a pixel image has an added dimension, sometimes called depth, that describes the number of bits in memory assigned to each on-screen pixel.

Id. As these definitions make clear, a “pixel” is a graphical element (on a screen or paper) in contrast to the data used to render that image. A “data block,” therefore, is not a picture or an image. Similarly, the data contained within a data block is not picture elements (pixels). A processor may convert images into data, and data can be used by a processor to render an image, and the image may be comprised of pixels. Also, in the Patent, images are not constrained to rectilinear grid representations, but are disclosed to include vector and polygonal representations. *See* Exh. B (‘189 Patent, col. 1, ln. 52; col. 8, ln. 46). Thus, computer processors act upon data, not images. That data may represent or be used to render an image, but it is not an image itself (nor is it a pixel).

Consistent with its plain usage in the art, and its usage in the Patent, the Court should define the phrase “data block” as ***“a quantity, set or amount of information or data representing a portion of the terrain.”***

2. terrain

Defendants argue that “terrain” should be defined as: “the surface features of an area of land; topology.” Defendants’ Br. at 12-13; Feiner Exh. A at 1. First, Defendants’ construction impermissibly attempts to limit “terrain” to land, based on a definition found in a non-technical dictionary. *See* Defendants’ Br. at 12; Feiner Decl., ¶ 19 (quoting *American Heritage Dictionary* definition of “terrain”). The Federal Circuit has “repeatedly cautioned against using non-

scientific dictionaries for defining technical words.” *AFG Indus., Inc. v. Cardinal Co., Inc.*, 239 F.3d 1239, 1247 (Fed. Cir. 2001). This is particularly true here, where Defendants’ proposed construction is directly contrary to the use of the term “terrain” in the Patent. *See also Anderson v. Int’l Eng’g & Mfg., Inc.*, 160 F.3d 1345, 1348-49 (Fed. Cir. 1998) (“A word describing patented technology takes its definition from the context in which it was used by the inventor.”).

The ‘189 Patent makes clear that “terrain” includes not only “surface features of land,” but may include other information as well. For example, the Patent states: “the terrain is not limited to the Earth or parts thereof, and may cover other planets (real or virtual) and/or 3D views of surfaces of real or imaginary objects, such as views showing the atomic structure of a material, and the like.” Exh. B (‘189 Patent, col. 16, lns. 16-24). As Defendants recognize in their brief, the presumption of ordinary meaning “may be overcome when the patentee acts as a lexicographer, setting forth a term’s definition in the specification that is different from its ordinary meaning.” Defendants’ Br. at 6 (citing *Axelis Techs. v. Applied Materials*, 66 U.S.P.Q.2d (BNA) 1039, 1044 (D. Mass. 2002) (Woodlock, J.)). Here, Skyline specifically defined “terrain” to include the physical features of areas *in addition to land*, such as “3D views of surfaces of real or imaginary objects, such as views showing the atomic structure of a material, and the like.” Exh. B (‘189 Patent, col. 16, lns. 16-24). Defendants’ proposed limitation, therefore, is directly contradicted by the express language of the Patent itself and should be rejected.

Consistent with its usage in the Patent, the Court should define the phrase “terrain” as ***“the physical features of an area, object or material, which includes geographic and/or elevation attributes and may include other features, such as color attributes and objects.”***

3. *renderer*

Defendants argue that “renderer” should be defined as:

a software and/or hardware object that performs each of the following steps: (1) determines the coordinates of terrain data required to create an image and sends the needed coordinates along with a specified resolution level to another object; (2) receives the data blocks corresponding to the provided coordinates; and (3) uses the received data blocks to create an image.

Defendants’ Br. at 14-18; Feiner Exh. A at 1. This overly-restrictive construction of “renderer” does not comport with the term’s use in the Patent. Skyline agrees with Defendants’ proposed construction of “renderer” only to the extent that it requires that the renderer is “a software and/or hardware object.”

Defendants seek to require that the “renderer” perform three (and only three) specific functions. According to Defendants, the “renderer” *must*:

- (1) determine the coordinates of terrain data required to create an image and sends the needed coordinates along with a specified resolution level to another object;
- (2) receive the data blocks corresponding to the provided coordinates; and
- (3) use the received data blocks to create an image.

Feiner Exh. A. Yet, the claims and the specification provide that the renderer has the ability to perform these *and other* steps and features.

First, Defendants’ proposed definition would require the renderer to “determine the coordinates of terrain data” This is not required by any of the independent claims, which simply require “receiving from the renderer one or more coordinates in the terrain....” Exh. B (‘189 Patent, Claims 1, 7). *See also id.*, Claims 3-5 (“receiving from the renderer a plurality of coordinates....”). Moreover, the specification makes clear that this step may be performed by either the renderer *or the cache manager*. The specification provides that:

[p]referably, renderer 72 determines which blocks 42 and/or

sub-blocks 43 include the required pixels. *Alternately, cache manager 74 determines the identity of the required blocks 42 and/or sub-blocks 43.*

Id., col. 11, lns. 24-27 (emphasis added). Thus, neither the claims nor the specification require or even suggest Defendants' proposed narrow reading of the term "renderer." Rather, as simply stated in the Patent, "[r]enderer 72 uses blocks 42 from cache manager 74 to render the required view on display 22." *Id.*, col. 12, lns. 58-60.

Second, Defendants' proposed definition is clearly wrong because it restricts the renderer to performing only three functions listed above. This defies the governing law. Claim 1, as well as a number of additional claims that contain the term "renderer," are "comprising" claims.¹⁰ The Federal Circuit has held that use of the term "comprising" creates an open claim in which the recited steps or elements may only be part of the product or process. *Vivid Techs., Inc. v. American Science & Eng'g, Inc.*, 200 F.3d 795, 811 (Fed. Cir. 1999) (stating that "'comprising' is generally understood to signify that the claims do not exclude the presence ... of factors *in addition to those explicitly recited.*") (emphasis added); *Stiftung v. Renishaw PLC*, 945 F.2d 1173, 1178 (Fed. Cir. 1991) (stating that a claims "which uses the term 'comprising' is an 'open' claim which will read on ... additional elements.")). Given the Patent's use of the term "comprising," it is clear that the "renderer" may perform steps *in addition to* those recited in the claims. Thus, the definition of "renderer" cannot be restricted to only those steps recited in Defendants' proposed construction.

Finally, there is no support for Defendants' requirement that the "renderer" perform at least the three recited steps. The Patent makes clear that the renderer assists in generating a view of the terrain using data from the data blocks. Exh. B ('189 Patent, col. 11, ln. 19-col. 13, ln. 17; Figs. 5, 8). The three steps that Defendants seek to require in their proposed construction of

¹⁰ See also Exh. B ('189 Patent, Claims 3, 4, 5, 7, 12, 13, 14, 15, 16 and 18).

“renderer” may be elements of certain claims, but they do not define the term “renderer.”

Rather, they articulate what actions are covered in the claims.

Consistent with its usage in the Patent, the Court should define the phrase “renderer” as *“something that may be implemented entirely in software or may include a dedicated hardware processor along with a software package running on a general purpose processor, which performs one or more steps of the recited method and assists in the display of the terrain based on the data provided.”*

4. *data blocks belonging to a hierarchical structure*

Even though Defendants seek to define the term “data block” in Section II(B)(1) above, they also seek to define an additional claim phrase that contains the term “data block”: “data block belonging to a hierarchical structure.” Defendants propose that this phrase should be defined as:

data blocks that are organized into multiple levels of resolution, whereby each level contains data blocks at the same resolution, and each successive level contains data blocks of a higher resolution than those in the preceding level.

Defendants’ Br. at 19-21; Feiner Exh. A at 1.

As discussed above, Skyline disagrees with Defendants’ proposed construction of the term “data block.” Skyline generally agrees with Defendants’ proposed construction of the phrase “hierarchical structure,” with one exception. The Patent does not support Defendants’ attempt to read into the claim a fixed “directionality.” For example, Skyline disagrees with Defendants’ proposed construction that “each *successive* level contains data blocks of a higher resolution than those in the *preceding* level.” It is unclear from this construction how to read “successive” and “preceding.” As used in the Patent, the phrase “hierarchical structure” means

that data blocks are arranged in an ordered resolution scheme, whether successively higher or lower in resolution. Exh. B ('189 Patent, col. 3, lns. 3-6; col. 8, ln. 15-col. 9, ln. 38; Fig. 2).

Consistent with its usage in the Patent, the Court should define the phrase “data block belonging to a hierarchical structure” as ***“data blocks arranged into multiple levels of resolution, wherein each level of the structure contains blocks of a different resolution.”***

5. coordinates in the terrain

Defendants argue that “coordinates in the terrain” should be defined as:

a pair of numerical coordinates, such as latitude and longitude
or x and y coordinates, of a particular location in the terrain.

Defendants’ Br. at 21-25; Feiner Exh. A at 1. Skyline disagrees with Defendants’ proposed construction of “terrain” (as discussed above in Section II(B)(2)) and of “coordinates.”

Defendants ask the Court to limit the phrase “coordinates in the terrain” to “a pair of numerical coordinates...of a particular location in the terrain.” Defendants suggests that this construction is somehow consistent with use of the phrase “one or more” in the claim because the claim could be referring to one or more pairs of coordinates. Defendants Br. at 23-24.¹¹ This is simply not what is recited in the claim. Instead, the claim explicitly recites “*one* or more coordinates in the terrain,” and not one or more “pairs” of coordinates. Exh. B ('189 Patent, col. 4 , ln. 15) (emphasis added). On its face, the claim contemplates that one, or more than one, coordinate may be used in practicing the claim. *Id.*

Defendants’ argument that there cannot be more than two coordinates similarly lacks support. Defendants themselves acknowledge that the '189 Patent expressly states that more

¹¹ Defendant argues that any operable system would require both an x and y coordinate. Defendants’ Br. at 23. This argument highlights the advisory nature of this claim construction exercise. If Defendant’s proposed construction is immaterial to the issue of infringement, there is no need for the Court to resolve this claim construction issue. *Vivid Tech., Inc. v. American Science & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

than two coordinates can be used. Defendants' Br. at 24. Nonetheless, Defendants argue that these "coordinates" are somehow unrelated to the "terrain." *Id.* As stated in the Patent:

[f]or each route, database 60 preferably includes a list 64 of *three-coordinate points* 66 which describe the route. The three coordinates preferably represent longitudinal, latitudinal, and height coordinates of the points along the course, as are known in *the art of terrain mapping*.

Exh. B ('189 Patent, col. 10, lns. 37-43) (emphasis added). Thus, when describing the types of coordinates used in the "art of terrain mapping," the specification expressly recognizes that the use of three -- not two -- coordinates of the terrain are preferable. The specification also provides that "terrain is not limited to the Earth or parts thereof, and may cover other planets (real or virtual) and/of *3D views of surfaces* of real or imaginary objects, such as views showing the atomic structure of material, and the like." *Id.*, col. 16, lns. 16-19 (emphasis added). The "3D" views would be represented by three coordinates (x, y and z), and would not be limited to two dimensions, contrary to Defendants' assertion.¹²

Consistent with its usage in the Patent, the Court should define the phrase "coordinates in the terrain" as "*any of a group of one or more numbers used to determine position in the terrain, such as x, y, longitude, latitude, height, and/or resolution level.*"

6. *indication of a respective resolution level*

Defendants argue that "indication of a respective resolution level" should be defined as:

data specifying the amount of detail per unit area corresponding to a level of resolution in the hierarchical structure of data blocks.

Defendants' Br. at 25-26; Feiner Exh. A at 1. Initially, Defendants argue that "resolution level" should be defined as "the amount of detail per unit area." Feiner Exh. A at 1. Skyline agrees that this term defines "the amount of detail," but disagrees that the detail is tied to a "unit area."

¹² Defendants also make much of the difference between coordinates "of" the terrain and coordinates "in" the terrain. Defendants' Br. at 22. This argument makes little sense, as the Patent is directed to a computer representation of terrain. Thus all coordinates must be representations *of* terrain -- not the actual terrain itself.

The resolution level refers to the level of detail of the data, which in some embodiments may be related to land or other things having an area, but is not limited to such embodiments. The amount of detail on the screen or computer monitor, moreover, may depend on the quality of the screen or computer monitor. Resolution level relates to the data (*e.g.*, residing in databases), not the display. Exh. B ('189 Patent, col. 8, lns. 59-67). Obviously, it may (and often does) impact the amount of detail per unit area that is displayed.

Defendants next seek improperly to limit the phrase to “data specifying ... a level of resolution in the hierarchical structure of data blocks.” Defendants’ Br. at 25. The claim, however, merely requires an “indication” of a resolution level, not a complete specification of the resolution level. *See, e.g.*, Exh. B ('189 Patent, Claim1). The ordinary meaning of “indication” is “something that indicates, points out, or signifies; sign.” The word “indicate,” in turn, means “to direct attention to; point to or point out; show.” Exh. 2 (*Webster’s New World College Dictionary* at 687 (3rd ed. 1999)). The Court should reject Defendants’ attempt to alter the plain and ordinary meaning of this term, which is consistent with its use in the Patent.

Consistent with its usage in the Patent, the Court should define “indication of a respective resolution level” as “*something that indicates, points out, or signifies a respective resolution level.*”

7. *receiving from the renderer one or more coordinates in the terrain along with indication of a respective resolution level*

Defendants argue that “receiving from the renderer one or more coordinates in the terrain along with indication of a respective resolution level” should be defined as:

an object other than the renderer receiving from the renderer one or more pairs of numerical coordinates, such as latitude and longitude or x and y coordinates, of a particular location in the terrain, and that object at the

same time also receiving from the renderer data specifying the amount of detail per unit area corresponding to a level of resolution in the hierarchical structure of data blocks.

Defendants' Br. at 25-26; Feiner Exh. A at 1.

Defendants attempt a second bite at the apple in seeking to redefine this claim element. Defendants have already argued at length the meaning of this language in its proposed construction of the term "renderer." Defendants' Br. at 16. Indeed, in construing the term "renderer," Defendants contend that the "renderer" "determines the coordinates of terrain data required to create an image and sends the needed coordinates along with a specified resolution level to another object." *Id.*; *see also* Feiner Exh. A at 1. The definition of "renderer," coupled with construction of the claim phrases "coordinates in the terrain" and "indication of a respective resolution level," more than adequately resolve any potential ambiguity or dispute with respect to this claim element. There is no need for the Court to undertake any additional construction.¹³

8. *data corresponding to the one or more coordinates*

Defendants argue that "data corresponding to the one or more coordinates" should be defined as:

data representing the terrain and any additional optional data objects to be overlaid on the terrain that is found at the coordinates received from the renderer.

Defendants' Br. at 26-28; Feiner Exh. A at 1. Defendants seek to introduce numerous limitations into this claim language, such as "terrain" and "objects overlaid on the terrain."

¹³ Defendants rely on *Brookhill-Wilk1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1299 (Fed. Cir. 2003) and *Hockerson-Halberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369, 1374-75 (Fed. Cir. 1999) to argue that the requested construction of long claim phrases and sentences is necessary notwithstanding the fact that the Court has already construed the core terms contained within those claim phrases or sentences. These decisions simply stand for the proposition that disputed claim terms should be understood in the context within which they appear. Simply because the language surrounding a disputed term is relevant to the Court's understanding of that claim term does not mean that Court's are required to construe the surrounding language. In fact, such overly broad construction of unnecessary phrases is specifically forbidden. *Vivid Tech., Inc. v. American Science & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (stating that only terms for which there is an actual controversy may be construed).

As discussed above in Section II(B)(1)), “data” is defined by the *Microsoft Computer Dictionary* as “an item of information.” Exh. 1 (*Microsoft Computer Dictionary* at 122 (4th ed. 1999)). In addition, Skyline discusses above the meaning of the term “coordinates.” See Section II(B)(5) *supra*. Finally, “corresponding” is defined as “related, accompanying.” Exh. 3 (*Webster’s New Collegiate Dictionary* (150th Anniversary ed. 1981) at 253). When combined, these terms are used in the Patent in accordance with their plain and ordinary meaning as understood by one of ordinary skill in the art.

Consistent with its usage in the Patent, the Court should give the phrase “data corresponding to the one or more coordinates” its plain meaning in view of the construction of “coordinates” provided above in Section II(B)(5).

9. *local memory*

Defendants argue that “local memory” should be defined as:

a memory that is part of the local computer that is performing the steps of the recited method.

Defendants’ Br. at 27-28; Feiner Exh. A at 1. Defendants, therefore, agree that a local memory is “memory of a local computer,” as Skyline proposes. The only remaining dispute concerns Defendants’ attempt improperly to import an added limitation that is simply not present in the claim, namely, that the “local computer” must perform all of the steps of the recited method. Defendants’ Br. at 27-28. Indeed, the preferred embodiment contemplates a client-server architecture in which certain steps could be performed by a client computer and certain steps could be performed by a server computer. Exh. B (‘189 Patent, col. 2, lns. 6-10, 26-37; col. 7, ln. 63-col. 8, ln. 13). These added limitation have no bearing on the definition of “local memory” and should be rejected by the Court.

Consistent with its usage in the Patent, the Court should define “local memory” as
“memory of a local computer.”

10. *a first data block*

Defendants argue that “a first data block” should be defined as:

the data block stored in local memory that is the first data block to be provided to the renderer in response to the coordinates in the terrain and the indication of a respective resolution level received from the renderer.

Defendants' Br. at 28-30; Feiner Exh. A at 1. This construction is overly verbose, and includes a host of limitations impermissibly imported into the claims from specification.

There is no basis for Defendants' reading that “a first data block” must be *the* very first data block provided to the renderer every time coordinates or a resolution are sent. Rather, as the language of Claim 1 makes clear, the phrase “*a* first data block” differentiates a data block provided to the renderer from the “one or more *additional* data blocks ...” that are downloaded from a remote server if the provided block is not at the indicated resolution level. Exh. B ('189 Patent, col. 16, lns. 36-43). Further, the specification does not support a rewriting of this phrase to mean “*the* first data block” provided before any other blocks are downloaded. Defendants' Br. at 30. To the contrary, the specification describes a system that operates on multiple blocks of data, which may be downloaded and stored in different orders. For example, the Patent provides:

[i]n some preferred embodiments of the present invention, the processor manages a local cache memory in which the processor stores blocks which cover terrain areas in the vicinity of the current viewpoint. Preferably, the processor stores in the cache memory all blocks downloaded from the server.

Exh. B ('189 Patent, col. 3, lns. 24-29). The Patent also describes an embodiment where “[p]referably, when the processor requires a number of blocks, the first block sent is the block of

the lowest level. If two blocks of the same level are required, the one which is requested last is sent first. Thus, when the viewpoint changes, the blocks sent first are for the new viewpoint, and only afterwards are blocks sent from the old viewpoint.” *Id.*, col. 3, lns. 41-46. Thus, contrary to Defendants’ suggestion, the Patent contemplates that multiple blocks of data will be stored in local cache memory, not merely the “first data block,” and that these multiple blocks of data may be provided to the renderer in a number of different sequences.

Defendants’ proposed construction would require that every time coordinates or a resolution level are received by the renderer, the first data block received must come from local memory. This limitation is directly contrary to the focus and stated purpose of the patented invention. The Patent describes a method by which data can be streamed or downloaded efficiently on a communication link of finite bandwidth, such as the Internet. *See, e.g.*, Exh. B (‘189 Patent, col. 5, ln. 19; col. 6, lns. 49-50; col. 7, ln. 10 (“the communication link includes a connection to the Internet.”)). The method is recited in a manner in which “a first data block,” which simply is one of a number of data blocks, is stored in “local memory.” *Id.*, Claim 1. Subsequent data blocks are then downloaded to provide the requested resolution level. *Id.*, col. 9, lns. 28-35; col. 12, lns. 58-65. As the user inputs a new coordinate or a new resolution level, additional data blocks are downloaded. Consequently, the first data blocks corresponding to new coordinates need not come from local memory. A “first data block” is simply a data block in a series of data blocks.

Consistent with its usage in the Patent, the Court should define “a first data block” as “***a designation of a data block that may be one of a plurality of data blocks.***”

11. *providing the renderer with a first data block which includes data corresponding to the one or more coordinates, from a local memory*

Defendants argue that “providing the renderer with a first data block which includes data corresponding to the one or more coordinates, from a local memory” should be defined as:

an object other than the renderer provides to the renderer a first data block which includes data representing the terrain and any additional optional data objects to be overlaid on the terrain that is found at the coordinates received from the renderer, this first data block being provided from a memory that is part of the local computer that is performing the steps of the recited method.

Defendants’ Br. at 30-31; Feiner Exh. A at 1-2.

Defendants’ proposed construction is verbose, confusing and based on re-interpretation of the same claim terms discussed herein (*see* above discussion of “renderer,” “first data block,” “data corresponding to the one or more coordinates,” and “local memory”). Skyline’s proposed constructions of these core claim terms more than adequately resolve any potential ambiguity or dispute with respect to this claim element. There is no need for the Court to undertake this additional construction.

12. *downloading from a remote server one or more additional data blocks at a resolution level higher than the resolution level of the first block which include data corresponding to the one or more coordinates if the provided block from the local memory is not at the indicated resolution level*

Defendants request construction of the claim element “downloading from a remote server one or more additional data blocks at a resolution level higher than the resolution level of the first block which include data corresponding to the one or more coordinates if the provided block from the local memory is not at the indicated resolution level.” Defendants’ Br. at 31-34. As set forth above, the parties have already proposed definitions for the terms “data blocks,” “resolution level,” “first [data] block,” “data corresponding to the one or more coordinates,” and

“local memory.” Nonetheless, Defendants seek a construction of each word that strings these core terms together in this claim sentence. Such construction is completely unnecessary.¹⁴

13. *communication link*

Defendants do not address Skyline’s proposed construction of the term “communication link.” In their description of the claimed invention, however, Defendants state that the ‘189 Patent relates to a “method and apparatus for providing three-dimensional terrain images to a computer over a network, such as the Internet....” Defendants’ Br. at 2. Thus, Defendants acknowledge that such links provide “communication” that occurs “over a network, such as the Internet.” *Id.* Skyline agrees with this characterization of the communication link (but disagrees with Defendants’ remaining characterizations of the invention in its brief). A “communication link” described in the ‘189 Patent is a network, such as the Internet, that provides data communication at some limited bandwidth and quality between local clients and remote servers. *See, e.g.*, Exh. B (‘189 Patent, col. 5, ln. 19; col. 6, lns. 49-50; col. 7, ln. 10 (“the communication link includes a connection to the Internet.”)). Indeed, the Patent provides that:

Preferably, the processor connects to the server via a public network, such as the Internet. Preferably, the data is conveyed by a standard modem at sufficient speed for relatively smooth display of the images.

Id., col. 2, lns. 33-37; *see also id.*, col. 3, lns. 20-24. The Patent further states that “establishing the communication link includes establishing a low-speed communication link.” *Id.*, col. 5, lns. 16-17; *see also id.*, col. 6, lns. 58-59.

¹⁴ Defendants rely on a statement from the patent prosecution history to argue that “claim 1 and all claims containing *similar* limitations must be construed ... to cover only the method where additional data blocks are always at a higher resolution level than the first block.” Defendants’ Br. at 34 (emphasis added). But only Claim 1 contains the claim language “one or more additional data blocks at a resolution level *higher than* the resolution level of the first block....” Exh. B (‘189 Patent, Claim 1). Moreover, Claims 5, 7 and 13 clearly contain no requirement that “additional data blocks are always at a higher resolution level than the first block.” *Id.*, Claims 5, 7, 13. This phrase, if construed, should be limited to Claim 1.

Consistent with its usage in the Patent, the Court should define “communication link” as *“a network connection, such as the Internet, used for transferring data between computers.”*

C. Defendants’ Remaining “Disputed” Claim Terms, Phrases, and Sentences.

Some combination of the core terms defined above are contained in every claim of the ‘189 Patent. Yet, Defendants ask this Court to construe approximately 45 *additional* claim terms, phrases and sentences. Such additional claim construction is unnecessary. At this early stage of these proceedings, the claim terms identified above provide the core constructions necessary to understand the claims of the Patent. It is legal error to construe claim terms for which there is no actual controversy. As the Federal Circuit has instructed, district courts should only construe “those terms ... that are in controversy, and only to the extent necessary to resolve the controversy.”¹⁵ *Vivid Tech., Inc. v. American Science & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999). There is no evidence of record at this stage to require construction of additional claim terms.¹⁶

Defendants request for construction of claim terms, phrases and sentences beyond those addressed herein is also improper because the Defendants simply seek re-interpretation of claim terms already discussed above. For example, the parties request construction of the terms “renderer,” “a first data block,” and “local memory.” Defendants nonetheless additionally request construction of the phrase “providing the renderer with a first data block which includes data corresponding to the one or more coordinates, from a local memory.” Defendants’ Br. at

¹⁵ Simultaneously with the filing of their responsive claim construction brief, Defendants have filed an 8-page brief entitled “Defendants’ Opposition to Skyline’s Attempted Request for Reconsideration of the Court’s Order Denying Skyline’s Motion to Compel and Clarify.” This lengthy response to a non-existent motion for reconsideration is puzzling.

¹⁶ Skyline reserves the right to supplement or revisit the issue of claim construction if there is an actual controversy with respect to additional claim terms after discovery commences. Skyline does not expect that additional claim construction will be necessary, however, as the core terms that the parties now jointly ask the Court to construe are found throughout the patent claims.

30. Such additional construction is completely unnecessary and only serves to complicate the meaning of this phrase. *See also id.* at 31-34.

III. CONCLUSION

Because the terms identified by Skyline as requiring construction by the Court are either defined in the Patent itself, are consistent with the terms' usage in the Patent itself, or are used in a manner wholly consistent with their plain and ordinary meaning, the Court should adopted Skyline's proposed definitions of the disputed claim terms.

Respectfully submitted,

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